

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel DUPUIS

Examiner: n/a

Serial No.: 10/553,579

Art Unit: n/a

Filed: October 17, 2005

For: HIGH POWER/WEIGHT RATIO BRAKING DEVICE BASED ON SHAPE
MEMORY MATERIAL TECHNOLOGYCommissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**INFORMATION DISCLOSURE STATEMENT**

Sir:

With regard to the above-identified application, pursuant to 37 C.F.R. §1.56, 1.97 and 1.98, the items of information listed on the enclosed Form PTO/SB/08A is brought to the attention of the Examiner.

This Information Disclosure Statement, as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits. The undersigned certifies that each item of information contained in the information disclosure statement was cited during prosecution of the corresponding International Patent Application PCT/CA2004/000590. The relevance of the references are as indicated in the attached PCT International Search Report.

A list of the patent(s) or publication(s) is set forth on the attached Form PTO/SB/08A. In accordance with 37 C.F.R. §1.98(2)(i), a copy of each patent listed on Form PTO/SB/08A is enclosed herewith.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such. The filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR § 1.56(a) exists.

Pursuant to the provisions of MPEP 609, it is requested that the Examiner return a copy of the attached Form PTO/SB/08A, marked as being considered and initialed by the Examiner, to the undersigned with the next official communication.

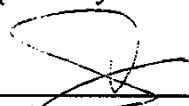
Applicant believes no fees are required with this submission. However, the Commissioner is hereby authorized to charge any deficiency deemed necessary to Deposit Account No. 19-1351.

Date: _____

4/21/06

Respectfully submitted,

By: _____


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20 OCT. 2004

INTERNATIONAL SEARCH REPORT

BREVETS/PATENTS
McCARTHY TÉTRAULT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 0058.003-WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/CA2004/000590	International filing date (day/month/year) 19/04/2004	(Earliest) Priority Date (day/month/year) 17/04/2003
Applicant VICTHOM HUMAN BIONICS INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☒ Unity of invention is lacking (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 3

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CA2004/000590

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

The braking device (28) is provided a set of shape memory alloy activators (58) positioned, in an agonistic-antagonistic configuration on each side of a brake lever (42). Braking and releasing phases are dictated by the austenitic transformation of the shape memory alloy activators. During brake activation, shrinking of the braking activator brings the friction pad (52) in contact with a rotating drum (40) creating a braking friction torque. Once the brake has been activated, deformation of a flexible fiberglass component (52) prevents brake releasing by applying sufficient normal force between the drum and the friction pad. Conversely, upon heating of the releasing activator, the pad loses its grip and the drum is free to rotate.

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-13

Friction brake with a two actuators, respectively applying or releasing the brake.

2. claims: 14-20

Prosthesis with two relatively-rotating limbs connected by a mechanical joint, an actuator moving the limbs and a brake acting on the actuator to inhibit relative movement in the joint.

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F16D49/00 F16D65/14 A61F2/30 F03G7/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F16D F03G A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 286 635 B1 (TAMOR) 11 September 2001 (2001-09-11) column 2, line 36 - column 3, line 22; figure 1	1
X	PATENT ABSTRACTS OF JAPAN vol. 0151, no. 74 (M-1109), 2 May 1991 (1991-05-02) & JP 3 037433 A (SONY), 18 February 1991 (1991-02-18) abstract	1,4-7
A	PATENT ABSTRACTS OF JAPAN vol. 0151, no. 03 (P-1178), 12 March 1991 (1991-03-12) & JP 2 310856 A (NEC ENG LTD), 26 December 1990 (1990-12-26) abstract	1,4,7
-/-		

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

20 October 2004

Date of mailing of the international search report

25 OCT 2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Becker, R

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 40 16 146 C (SIEMENS) 14 August 1991 (1991-08-14) the whole document	1,4
A	US 4 932 210 A (JULIEN ET AL.) 12 June 1990 (1990-06-12) column 6, line 21 - line 42; figure 1	1,4-6
X	US 3 557 387 A (OHLENBUSCH ET AL.) 26 January 1971 (1971-01-26) column 4, line 44 - column 5, line 19; figures 1-11	14-17
X	WO 94/09727 A (ANDREWS) 11 May 1994 (1994-05-11) page 17, line 17 - page 19, line 11; figure 8 page 30, line 24 - page 31, line 2	14,15
X	US 4 792 338 A (RENNERFELT) 20 December 1988 (1988-12-20) column 3, line 4 - line 34; figures 2,3 column 5, line 49 - line 55	14,15

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6286635	B1	11-09-2001	NONE	
JP 3037433	A	18-02-1991	NONE	
JP 2310856	A	26-12-1990	NONE	
DE 4016146	C	14-08-1991	DE 4016146 C1	14-08-1991
US 4932210	A	12-06-1990	NONE	
US 3557387	A	26-01-1971	NONE	
WO 9409727	A	11-05-1994	AU 5343394 A WO 9409727 A2	24-05-1994 11-05-1994
US 4792338	A	20-12-1988	SE 451053 B EP 0219478 A1 SE 8504780 A	31-08-1987 22-04-1987 16-04-1987



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Application Number	10/553,579
Filing Date	10/17/2005
First Named Inventor	Daniel DUPUIS
Group Art Unit	n/a
Examiner Name	n/a
Attorney Docket Number	39438-402800

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US-6286635B1	09-11-2001	Tamor	
		US-4932210A	08-12-1990	Julien et al	
		US-3557387A	01-28-1971	Ohlenbusch et al	
		US-4792338A	12-20-1988	Rennerfelt	
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ₆
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
	B1	JP3037433A	02-18-1991	Sony Corp		
	B2	JP2310856A	12-28-1990	NEC Eng Ltd		
	B3	DE4016146C	08-14-1991	Siemens AG		
	B4	WO94/09727A	05-11-1994	Andrews		
	B5					
	B6					

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ₂
	C1		
	C2		
	C3		
	C4		

Examiner Signature

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.